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| For Academic Affairs and Research Use Only |
| Proposal Number |  |
| CIP Code:  |  |
| Degree Code: |  |

**Program Modification Form**

**[ ] Undergraduate Curriculum Council**

**[x] Graduate Council**

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| **Modification Type: [ ]Admissions, [ ]Curricular Sequence, or [X]Other**  |

Signed paper copies of proposals submitted for consideration are no longer required. Please type approver name and enter date of approval.

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| Hong Zhou | 1/26/2021 |

**Department Curriculum Committee Chair** |

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**COPE Chair (if applicable)** |
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| Amanda Lambertus | 1/27/2021 |

**Department Chair**  |

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**Head of Unit (if applicable)**   |
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| John Hershberger | 2/2/2021 |

**College Curriculum Committee Chair** |

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**Undergraduate Curriculum Council Chair** |
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**Director of Assessment** *(only for changes impacting assessment)* |

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**Graduate Curriculum Committee Chair** |
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| Lynn Boyd | 2/2/2021 |

**College Dean** |

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| Alan Utter | 2/26/2021 |

**Vice Chancellor for Academic Affairs** |
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**General Education Committee Chair (if applicable)**   |  |

1. **Contact Person** (Name, Email Address, Phone Number)

Jie Miao, jmiao@astate.edu, 870-680-8168

1. **Proposed Change** (for undergraduate curricular changes please provide an 8-semester plan (appendix A), if applicable)

The proposed changes for MS Mathematics degree requirements are (1) the number of total hours is changed from 36 to 33, (2) the two-semester sequence requirement is changed from 3 to 2, (3) a minimum number of graduate credit hours with MATH prefix is changed from not specified to 27.

1. **Effective Date**

8/16/2021

1. **Justification –** *Please provide details as to why this change is necessary.*

 The current MS Mathematics degree requirements have not been updated for decades and it is necessary to revise them to keep up with similar programs in the state, and also to bring it in line with the new MS Statistics degree program in the department.

1. The MS Mathematics degree at A-State currently requires 36 hours. The same degree at University of Arkansas requires 32 hours, and that at University of Central Arkansas requires 33 hours for the non-thesis option and 30 hours for the thesis option. The MS Statistics degree offered by the department requires 33 hours.
2. The current MS Mathematics degree requires students to take 3 two-semester sequences. There is no restriction on how many statistics courses or statistics sequences can be taken to fulfill the MS Mathematics degree requirements. For example, both sequence STAT 6653/ 6663 and sequence STAT 6703/6713 can be used to fulfill 2 of the 3 two-semester sequences for the MS Mathematics degree. Because of the new MS Statistics degree program, it is necessary to change that so the MS Mathematics degree emphasizes the study of mathematics. It is appropriate to remove those two statistics sequences from the MS Mathematics degree requirements. The 3 two-semester sequence requirement needs to be changed to 2 because of the removal of those two statistics sequences. It is also appropriate to set a minimum number of credit hours with MATH prefix for the MS Mathematics degree.

two

**Bulletin Changes**

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| **Instructions**  |
| **Please visit** [**http://www.astate.edu/a/registrar/students/bulletins/index.dot**](http://www.astate.edu/a/registrar/students/bulletins/index.dot) **and select the most recent version of the bulletin. Copy and paste all bulletin pages this proposal affects below. Please include a before (with changed areas highlighted) and after of all affected sections.** **\*Please note: Courses are often listed in multiple sections of the bulletin. To ensure that all affected sections have been located, please search the bulletin (ctrl+F) for the appropriate courses before submission of this form.**  |

**Page 285:**

**Program of Study for the Master of Science in Mathematics**

 **ADMISSION REQUIREMENTS**

Students seeking admission into the Master of Science degree program in Mathematics, must meet the admission requirements of Graduate Admissions and the specific program requirements. Students may not take 6000-level courses for credit until all undergraduate deficiencies have been removed.

**Mathematics**

 **Master of Science**

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| **~~University Requirements:~~** |  |
| ~~See Graduate Degree Policies for additional information (p. 38)~~ |  |
| **~~Program Requirements:~~**~~Minimum 21 hours of 6000-level coursework excluding thesis.~~ | **~~Sem. Hrs.~~** |
|  ~~Select three of the following two-semester sequences:~~ ~~MATH 6823, Functions of a Real Variable I AND~~ ~~MATH 6833, Functions of a Real Variable II~~ ~~MATH 6853, Functions of a Complex Variable I AND~~ ~~MATH 6863, Functions of a Complex Variable II~~  ~~MATH 6603, Abstract Algebra I AND~~ ~~MATH 6613, Abstract Algebra II~~  ~~STAT 6653, Data Analysis I AND~~ ~~STAT 6663, Data Analysis II~~ ~~MATH 6753, Point Set Topology AND~~ ~~MATH 6623, Differential Geometry~~  ~~MATH 6873, Numerical Analysis I AND~~ ~~MATH 6883, Numerical Analysis II~~  ~~STAT 6703, Statistical Analysis I AND~~ ~~STAT 6713, Statistical Analysis II~~ | ~~18~~ |
|  ~~MATH/STAT Electives~~ | ~~12~~ |
|  ~~Approved electives in related area~~ |  ~~6~~ |
| **~~Sub-total~~** | **~~36~~** |
| **~~Total Required Hours:~~** | **~~36~~** |

**Mathematics**

 **Master of Science**

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| **University Requirements:** |  |
| See Graduate Degree Policies for additional information (p. 42) |  |
| **Program Requirements:** | **Sem. Hrs.** |
| **Select two of the following two semester sequences**MATH 6823, Functions of a Real Variable I **AND**  MATH 6833, Functions of a Real Variable IIMATH 6853, Functions of a Complex Variable I **AND** MATH 6863, Functions of a Complex Variable II MATH 6603, Abstract Algebra I **AND**MATH 6613, Abstract Algebra II MATH 6753, Point Set Topology **AND** MATH 6623, Differential Geometry MATH 6873, Numerical Analysis I **AND**MATH 6883, Numerical Analysis II | 12 |
| **Select three of the following courses:**MATH 6813, Advanced Ordinary Differential Equations MATH 6643, Advanced Linear AlgebraMATH 6653, Theory of NumbersAny course listed in the box above that is not used for two sequence requirement (a sequence is not required) | 9 |
| MATH electives | 6 |
| Approved electives in related area | 6 |
| **Sub-total** | **33** |
| **Total Required Hours:** | **33** |